

ABSTRACT

A device comprising a pixilated semiconductor detector or VLSI chip having plurality of individual indium bumps arrayed on a surface of the detector, wherein the indium bumps are in electrical contact with the surface and are situated in defined locations on the surface is provided. Additionally, a hybrid detector comprising a pixilated detector in electrical contact with a VLSI chip, wherein electrical contacts formed from indium metal are made between the pixels of the semiconductor and regions on the VLSI chip corresponding thereto is provided. In another embodiment, a method of forming electrical contacts on a pixilated detector comprising the steps of constraining a shadow mask having an array of holes in predetermined locations above a surface on the detector, aligning the mask above the detector, and evaporating indium metal under vacuum through holes in the mask onto the surface of the detector to form the contacts is described.